POLYCHAETA

BY

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GÖTEBORG

present collection of Polychaetes was ed by the Swedish Deep-Sea Expedition -1948. I wish to express my thanks to oologist of the expedition, Dr ORVAR LIN, for having placed the material at sposal.

worms were captured in depths of -7,900 m, and a great part of the speci- are in consequence more or less damaged, some there are only fragments left. The number of species is 23, of which however reatest part are too fragmentary to be inable.

ee species are described as new to science. of them have however great affinities earlier described species. But as I think mischievous to erect too many species o confuse distinct forms I have thought er to keep the species in question apart e present.

e unfortunately empty tubes, probably Terebellid, were captured at St. 370, -7,900 m, the greatest depth from which of living creatures have hitherto been In the same haul there were also ents of a *Macellicephala*.

Fam. APHRODITIDAE

Laetmatonice filicornis KINBERG

atonice filicornis FAUVEL. 1914, 1923

Text-fig. 1 a.

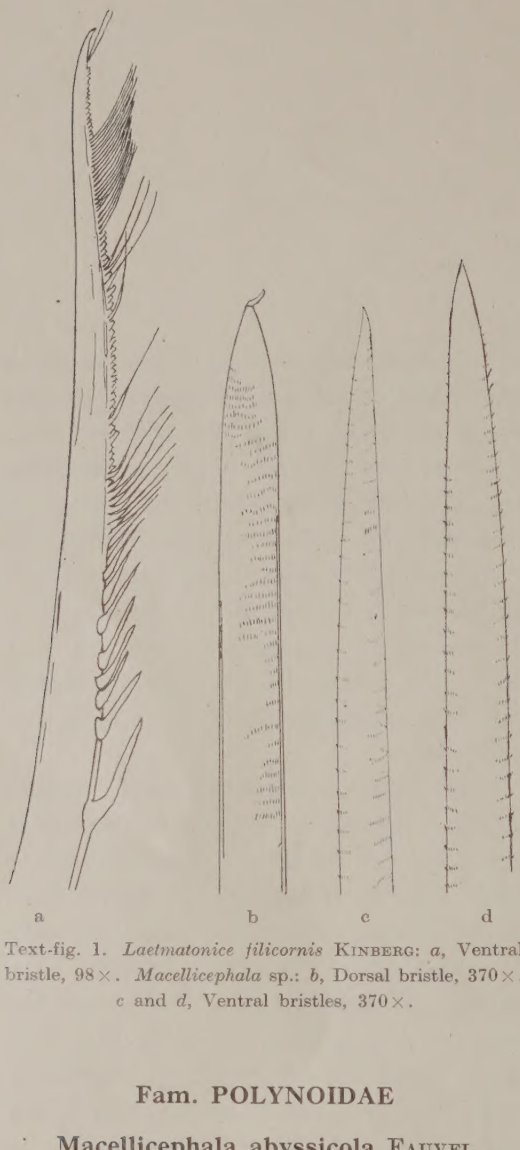
erial: St. 387 (Haul No. 13), N 40° W 35° 24′—N 40° 34′ W 35° 52′, Sept. 1948; depth 4,540—4,600 m.

Two complete specimens and a fragment of a third all in poor condition. Greatest length 48 mm by 13 mm with the feet. Palps about 17 mm. 15 pairs of elytra. No dorsal felting. Most of the bristles are broken or discarded, but some harpoon bristles are lying loose in the glass. Some attain a length of 34 mm, but most are 20—30 mm long. They have 3—4 recurved hooks on each side. The ventral bristles from the middle part of the body have from 70 to more than 100 hairs.

FAUVEL (1914, p. 34) states that *L. filicornis* KINBERG is found in the Atlantic down to at least 5,000 m. The present specimens seem to differ from specimens of *L. filicornis* from Swedish waters in having a longer and more cylindrical body. This may however be a question of preservation. Furthermore the loose harpoon bristles, assuming that they belong to the present worms, are remarkably long, and the ventral bristles have much thicker and stiffer hairs proximally even in the middlemost chaetigers (Text-fig. 1 a). The ventral bristles of *L. filicornis* vary, however, rather considerably, and in very small specimens, from one to a few mm, they resemble those of *Hermione hystrix*.

Within the limits of the material I do not find the present specimens separable from KINBERG's species, though they have certain affinities with MC INTOSH's varieties of *L. producta* (1885).

Distribution: Atlantic, Japan, Australia (fide FAUVEL 1914, 1923).



Text-fig. 1. *Laetmatonice filicornis* KINBERG: *a*, Ventral bristle, 98×. *Macellicephala* sp.: *b*, Dorsal bristle, 370×. *c* and *d*, Ventral bristles, 370×.

Fam. POLYNOIDAE

Macellicephala abyssicola FAUVEL

Macellicephala abyssicola FAUVEL 1913, 1914, 1927.

Material: St. 313 (Haul No. 1), N 29° 48′ W 17° 39′—N 30° 05′ W 17° 18′, June 16th 1948; depth 4,267—4,255 m: 1 specimen.

St. 319 (Haul No. 2), N 22° 31′ W 23° 28′—N 22° 41′ W 23° 10′, June 21st 1948; depth 4,872—4,867 m: 1 specimen.

FAUVEL's specimens were taken in the Bay of Biscay at a depth of 4,380 m.

Macellicephala sp.

Text-figs. 1 b—d.

Material: St. 370 (Haul No. 9), N W 65° 01′—N 19° 42′ W 64° 44′, Aug —18th 1948; depth 7,900—7,625 m

Three small fragments and one p possibly of the same specimen. T boscis is light brown and the the fragments are colourless in f Palps and cirri are lacking. Three facial tubercle and frontal horns prostomium.

The bristles preserved are for the m embedded in the parapodia and have affinities with those of *M. mirabilis* Mc (1885) and *M. violacea* LEVINSEN (188 dorsal ones are straight and need with transverse spinous rows visible high magnification (Text-fig. 1 b). The bristles are in side view slightly cu frontal view rather like the dor with distincter spinous rows, alth certain aspects the spines are visi at the margins of the bristles (1 c, d).

The present fragments are too sm in too poor condition to be deter Judging from the shape of the brist belong to a species very near *M. mira* probably they are referable to this sp which LEVINSEN's *M. violacea* is a synonym.

M. mirabilis is recorded from the between New Zealand and South 13—1,260 m (MC INTOSH 1885, MON 1936, AUGENER 1932 a), *M. violacea* Arctic Ocean and the North Atlant 1,500 m (LEVINSEN 1887, WIRÉN 19 LEVSEN 1917). FAUVEL (1914), who *M. violacea* as a synonym of *mirab* found this near the Azores, 1,095 AUGENER (1933) records it from th Atlantic.

dmetella longipedata Mc Intosh

pë (*Admetella*) *longipedata* Mc Intosh 1885
etella hastigerens Chamberlin 1919.

erial: St. 401 (Haul No. 14) N 43° 40′
8° 45′—N 43° 24′ W 18° 59′, Sept. 15th
8; depth 5,000—5,025 m: 1 specimen.

ropodial bristles with and without bifid

ribution: Atlantic: N 61° 44′ W 30° 29′,
fms (Ditlevsen 1917), West Indies, 291
Augener 1906); Indian Ocean: Prince
d Island, 1,375 fms (Mc Intosh 1885),
of Somali, 1,242 m (Ehlers 1912); East
, S 2° 40′ E 128° 37,5′, 835 m, S 7° 19,4′
° 49,5′, 538 m (Horst 1917); ? Pacific,
6′ W 81° 45′, 1,063 m (Chamberlin 1919).

Fam. ALCIOPIDAE

Vanadis crystallina Greeff?

lis crystallina Fauvel 1923.

erial: St. 329 (Haul No. 3), N 09° 38′
6° 20′—N 09° 50′ W 26° 30′, July 3rd
8; depth 5,610—5,600 m.

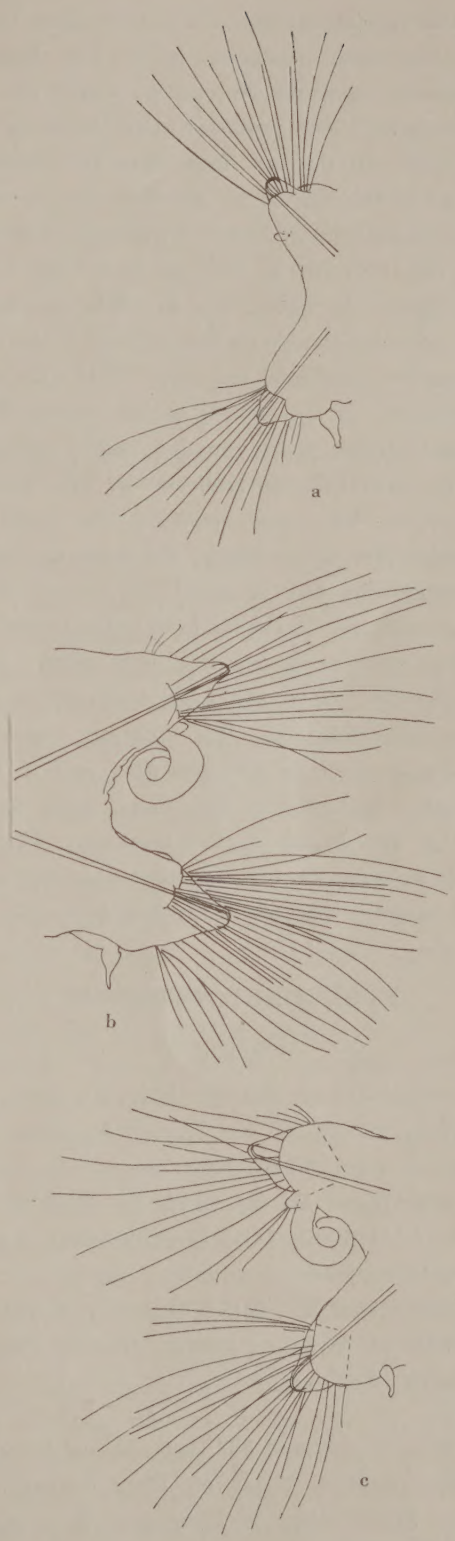
gment of the middle and posterior part
body. The shape of the parapodia and
ape and position of the segmental glands
e same as in *V. crystallina*.
ribution: The Atlantic and the Mediter-
n (Fauvel 1923); New Zealand (Benham
fide Støp-Bowitz 1948).

Fam. NEPHTHYDIDAE

Nephthys elamellata n. sp.

Text-fig. 2.

erial: St. 313 (Haul No. 1), N 29° 48′
7° 39′—N 30° 05′ W 17° 18′, June 16th
8; depth 4,267—4,255 m.
87 (Haul No. 13), N 40° 33′ W 35° 24′
40° 34′ W 35° 52′, Sept. 7th 1948; depth
0—4,600 m.



Text-fig. 2. *Nephthys elamellata: a*, 10th foot from before. *b*, 20th foot from before. *c*, 20th foot from behind, 21×.

Two specimens from each station. They have all lost their posterior ends. The largest fragment measures 36 mm in length for 42 chaetigers. The proboscis has 14 rows of papillae. In the first foot there is a ventral cirrus of the size of the antennae and a very small dorsal cirrus. The first trace of a branchia on the 13th or, in one specimen, the 11th chaetiger. At about the 20—25th chaetiger the branchia attains its full size and in the last preserved chaetiger, the 42nd, it is still well developed. It is generally coiled inward. The dorsal cirrus is short, rounded, nearly oviform, on the caudal side of the branchia. The chaetal lobes are long and pointed. The anterior lamellae are rudimentary, the posterior more developed but still very small. The ventral cirrus larger than the dorsal and more or less pyriform.

The aciculae have a long bent point. The bristles are yellow and long; the anterior are unusually long, in the anterior segments nearly as long as the posterior, and in the middle of the body they can attain about 2/3 of the length of the posterior. In the 20th segment there are about 50 anterior and 150 posterior bristles in the notopodium.

Fam. CHAETOPTERIDAE

Gen. et sp.?

Material: St. 329 (Haul No. 3), N 09° 38′ W 26° 20′—N 09° 50′ W 26° 30′, July 3rd 1948: depth 5,610—5,600 m.

St. 363 (Haul No. 8), N 12° 22′ W 52° 00′—N 12° 13′ W 51° 44′, August 3rd 1948; depth 5,044—5,033 m.

St. 387 (Haul No. 13), N 40° 33′ W 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 1948; depth 4,540—4,600 m.

From St. 329 and 363 there are only empty tubes recalling those of *Phyllochaetopterus*. From St. 387 there is a fragment, three chaetigers, probably from the anterior region of a Chaetopterid.

Fam. CIRRATULIDAE

Gen. et sp.?

Plate I, figs. 1 a—c.

Material: St. 387 (Haul No. 13), N W 35° 24′—N 40° 34′ W 35° 52′, Se 1948; depth 4,540—4,600 m.

An anterior end in poor conditio prostomium and about the 14 follow ments are stained with black spots Fig. 1 a). On the metastomial a segment there are two scars probab tentacular filaments. No visible mar gills. There are two kinds of bristles the noto- and in the neuropodium, l short (Pl. I, Fig. 1 b, c). The long brist in the anterior chaetigers very long tips back they become shorter.

Macrochaeta sp.

Material: St. 363 (Haul No. 8), N W 52° 00′—N 12° 13′ W 51° 44′, Au 1948; depth 5,044—5,033 m.

Very small fragments. On account structure of the bristles referred to thi There are at the most 3 compound br each parapodium.

Fam. SCALIBREGMIDAE

Gen. et sp.?

Material: St. 363 (Haul No. 8), N W 52° 00′—N 12° 13′ W 51° 44′, Au 1948; depth 5,044—5,033 m.

A very small fragment. On accoun structure of the bristles referred to this

Fam. OPHELIIDAE

Trachytrypane jeffreysi Mc Int

Trachytrypane jeffreysi Mc Intosh 18 *Trachytrypane jeffreysi* Fauvel 191 1927.

erial: St. 387 (Haul No. 13), N 40° 33′ 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 8; depth 4,540—4,600 m: 2 specimens.

tribution: Atlantic: N 59° 10′ W 50° 25′, fms (Mc Intosh); N 46° 45′ 45″ W 05° ,910 m (Fauvel).

Ammotrypane nybelini n. sp.

Plate I, figs. 2—3, Text-fig. 3.

erial: St. 387 (Haul No. 13), N 40° 33′ 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 8; depth 4,540—4,600 m: 1 specimen.

e single specimen measures 48 mm by 2 mm at the widest part. Just behind h segment it is damaged and the segments t be counted exactly. Probably there 5. On the right side there is at the posterior ne parapodium more than on the left Pl. I, Fig. 3).

stomium with palpode, dorsally com-ed vertically. The nuchal organ forms a fissure faintly pigmented at the bottom -fig. 3).

the anterior 6 segments the body is l in section, further back compressed the sides and at the posterior end very The anterior segments have no visible al groove and only very faintly developed l grooves. The anterior region seems ver to be swollen up, and perhaps these es are more prominent in undamaged mens. Backwards from the 7th segment entral groove becomes gradually deeper. ie hinder third of the body it is very w, in the last 5 segments however some-dilated (Pl. I, Fig. 3).

e parapodia have in the anterior segments ger dorsal and a smaller ventral lobe -fig. 3). Further back the bristles seem ject from an unlobed parapodium. The es are in the anterior segments shorter those of *A. aulogaster* Rathke and *lindricaudatus* A. Hansen. In the poste-

Text-fig. 3. *Ammotrypane nybelini:* Anterior end from the side and from above, 13×.

rior segments they are few, short and straight, but not thick as those of *A. cylindricaudatus.*

The branchiae are mostly lost but were presumably present in all segments except the first and the 4—5 terminal. On the 2nd to the 8th segments they are very small (Text-fig. 3). On the 26th to the 31st segments, where the branchiae are preserved, they are considerably longer than the length of the segments (Pl. I, Fig. 2).

The anal cylinder (Pl. I, Fig. 2, 3) is compressed vertically with wrinkles along its hinder margin except at its dorsal and ventral peak. On the anterior margin of the anal cylinder there is ventrally an oblique conical papilla, the distal part of which is pulled off. This papilla is situated a little to the left, possibly because the hinder end of the body is a little distorted by the supernumerary right parapodium (Pl. I, Fig. 2, 3).

The present specimen bears a great resemblance to *Ammotrypanella arctica* Mc Intosh (1877, p. 505) and differs from Mc Intosh's description only in having a palpode on its prostomium, shorter bristles in the anterior segments, wrinkled posterior margin of the anal tube and a papilla at the anterior ventral margin of the anal tube. Fauvel (1914, p. 246) has attributed a specimen from the Azores, 4,360 m, to Mc Intosh's species. From his

description the present specimen chiefly differs only in having a papilla at the anterior ventral margin of the anal tube.

This papilla may be a deformity, but as *Terpsichore delapidans* KINBERG (1865, 1910) = *Ammotrypane delapidans* (KINB.) EHLERS (1901), has a somewhat similar »anal branchia», I think it most convenient to let the present specimen have its own name.

Ophelina helgolandiae AUGENER (1912, p. 174) is close to this species but differs in some respects.

Fam. CAPITELLIDAE

Gen. et sp.?

Material: St. 387 (Haul No. 13), N 40° 33′ W 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 1948; depth 4,540—4,600 m.

One anterior fragment.

Fam. MALDANIDAE

Asychis amphiglypta (EHLERS) var. abyssicola n. var.

Plate I, figs. 4—6; Text-fig. 4.

Material: St. 363 (Haul No. 8), N 12° 22′ W 52° 00′—N 12° 13′ W 51° 44′, August 3rd 1948; depth 5,044—5,033 m.

4 fragments: one anterior end with 4 chaetigers, one posterior end with 10 chaetigers and two fragments from the middle part of the body with 6 chaetigers each. The anterior end measures 6.5 mm by 0.8 mm at the widest part, the posterior end 21 mm by 0.5—0.6 mm.

These fragments agree in the main with *Maldane amphiglypta* EHLERS (1897, p. 119), more exhaustively redescribed in 1911 by ARWIDSSON (p. 35) as *Asychis amphiglypta* (EHL). They differ however from EHLERS' species in some respects.

They are more slender with elongated chaetigers (Pl. I, Fig. 5, 6). The anterior chaetigers are about twice as long as The 8th chaetiger from the posterior about 6 times as long as broad, whil *amphiglypta*[1]) from the Antarctic this c in the most stretched specimens is nev than 3.2 times longer than broad; the for the 9th chaetiger from the poster are 5.3: 1 and 3.1: 1 respectively. chaetigers are the only ones stretched full length in ARWIDSSON's material.

The cephalic plate resembles that *amphiglypta*, but the keel is broad higher and the nuchal organs straighte Fig. 4). Seen from the side the head re that of *Maldane* (Pl. I, Fig. 5). Th however be a matter of contraction.

In the form of the anal plate the specimen agrees with *A. amphiglypta*, the lateral incisions are scarcely per (Pl. I, Fig. 6). I cannot determine there is more than one achaetous a segment.

The anterior end shows little gl development (Pl. I, Fig. 5) compare ARWIDSSON's specimens (1911, Pl. 1, F The greater part of the keel and of the part of the cephalic plate is almost of glands. Behind the borders there is of numerous glandular spots, that back becomes sparser. On the following tous segment there are dorsally two marked bands and on the 1st chaetig tered glandular spots concentrated to band above the bristles. The dorsal sid three following chaetigers is faintly stain scattered glands, most frequent on t No bands or groups of glands as in and 4th chaetigers of ARWIDSSON's spe

On the ventral side there is a cres glandular spots at the anterior end, tw groups before the mouth and a crescent it. A band of glands runs along the med

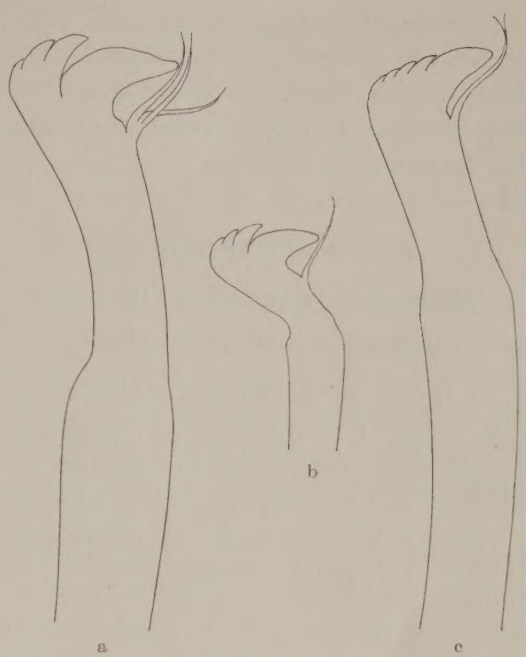
[1]) Professor N. ODHNER, Riksmuseum, Stockh kindly lent me some of ARWIDSSON's specimens fr Georgia and Graham Region.

ɔt on the posterior part of the first and anterior part of the second chaetiger, distinctly marked in its foremost part. ıd the hooks of the second chaetiger there V-shaped patch of large glands. The 3rd especially the 4th chaetiger have very e prechaetal glandular girdles and thinner gular areas behind the bristles. For the the ventral side is very faintly stained here are large bright areas almost without ls at the sides of the median line on the and above all on the 3rd chaetiger and ıe anterior half of the 4th (Pl. I, Fig. 5). ıe chaetigers of the middle and the hinder of the worm the glands have the same ibution as in EHLERS' species.

e bristles are like those of *A. amphiglypta*, have very long tips in the posterior seg- s. The hooks of ARWIDSSON's specimens rather considerably. Text-fig. 4 a is the 12th chaetiger of one of his largest ıples from Graham Land, and Text-fig. from the 15th chaetiger of one of the lest from South Georgia. The hooks of present fragments are in the anterior tigers like the corresponding ones of IDSSON's specimens but have somewhat er necks and 4 rows of teeth. Those of middle and posterior chaetigers are more rent. They have a proportionately thicker with less developed occiput and are also open (Text-fig. 4 c). There are at least rows of teeth above the main fang and times four. The subrostal barbules are nearer the base of the main fang.

ıough the present fragments may be oung representatives of *A. amphiglypta* ERS), I have thought it most suitable for present to let them constitute a variety of own.

ıe chief differences would then be 1) the edingly slender chaetigers, 2) the high broad keel, 3) the less developed glandular pment of the anterior part, and 4) the open and thicker hooks.



Text-fig. 4. *Asychis amphiglypta* (EHLERS): *a*, Hook from the 12th chaetiger of a large specimen from Graham Land, 530×. *b*, Hook from the 15th chaetiger of a small specimen from South Georgia, 635×. *Asychis amphiglypta* var. *abyssicola*: *c*, Hook from the 8th chaetiger from the posterior end, about 1100×.

Fam. OWENIIDAE

Owenia? sp.

Material: St. 363 (Haul No. 8), N 12° 22′ W 52° 00′—N 12° 13′ W 51° 44′, August 3rd 1948; depth 5,044—5,033 m.

Fragments of tubes about 2 mm wide, some with remnants of the worm. The tubes resemble those of *Owenia fusiformis* from the deep part of the Skagerack. Like those they are coated with Foraminifera, the imbrication of which is less obvious than in specimens from shallower waters. There is no anterior end preserved. Of the two teeth of the hooks one is placed higher than the other, almost as in *Myriochele heeri*.

Myriochele? sp.

Material: St. 387 (Haul No. 13), N 40° 33′ W 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 1948; depth 4,540—4,600 m.

An empty tube about 50 mm long, white, coated with fragments of Foraminifera. Probably of this genus. The tube agrees with that described by FAUVEL (1936, p. 33) from the Antarctic.

Fam. AMPHARETIDAE

Melinnopsis atlantica Mc INTOSH?

Melinnopsis atlantica Mc INTOSH 1885.

Material: St. 363 (Haul No. 8), N 12° 22′ W 52° 00′—N 12° 13′ W 51° 44′, August 3rd 1948; depth 5,044—5,033 m: 4 specimens.
St. 387 (Haul No. 13), N 40° 33′ W 35° 24′—N 40° 34′ W 35° 52′, Sept. 7th 1948; depth 4,540—4,600 m: 1 specimen.

From a number of thick muddy tubes 5 anterior fragments could be extracted. The small fragments from St. 363 are in very poor condition, the posterior part of the thorax and the abdomen being quite macerated. The specimen from St. 387 is in somewhat better condition. Within the limits of the material these fragments seem to be close to *Melinnopsis atlantica* Mc INTOSH (1885, p. 441), *Melinna monocera* AUGENER (1906, p.177), *Sosanopsis armipotens* MOORE (1923, p. 215) and *Moayanus explorans* CHAMBERLIN (1919, p. 452).

The tentacles are mostly lost. Only one specimen from St. 363 has a few tentacles left, one of which is about twice as large as the others. The specimen from St. 387 has an enormous, long and very broad median tentacle. Its ventral side is flattened with a longitudinal groove and undulated margins.

There seems to have been 4 gills on each side. There are no visible dorsal spines and no crista behind the gills as in *Melinna* but a posterior glandular band on the dorsal side of the 4th chaetiger. The 5th—7th chaetigers are dorsally more or less uniformly glandular.

The specimen from St. 387 has 16 thoracic chaetigers. The two first carry only ventral »Melinna-bristles», the 3rd ventral »Melinna-bristles» and an inconspicuous bundle dorsal bristles. The 13 following chaetig normal thorax-parapodia. I am, howe quite sure that there are hooks in chaetiger. The bristles and hooks those described by AUGENER and The thoracic hooks have 3—5, gene teeth arranged in one vertical row and those figured by Mc INTOSH (Pl. 27 A, and AUGENER (Pl. 6, Fig. 125). The ab hooks agree with MOORE's descript figures (Pl. 18, Fig. 29).

Mc INTOSH (p. 442) says of *Mel atlantica* that »the snout is injured proboscis protrudes». It is possible INTOSH has mistaken an unpaired thick for a protruding proboscis, as I did at first.

As far as they go the present fr agree with Mc INTOSH's description *Melinna monocera* and *Sosanopsis ar* they differ only in having a few dorsal on the 3rd chaetiger.

Melinnopsis atlantica was captured 25′ W 71° 40′ at a depth of 1700 fms, *monocera* off Martinique and Santa West Indies, 116—170 fms, and *So armipotens* off Southern California a 01′ 35″ W 121° 32′, 2228 fms. *Moayo plorans* from off Peru, 4,063 m, is closely related species.

Fam. TEREBELLIDAE

Trichobranchus sp.

Material: St. 363 (Haul No. 8), N W 52° 00′—N 12° 13′ W 51° 44′, Au 1948; depth 5,044—5,033 m.

A small fragment, the 5 last thora a few abdominal chaetigers. On acc the structure of the abdominal hook have about 3 irregular rows of n minute teeth above the main fang, to this genus.

Pista sp.

erial: St. 363 (Haul No. 8), N 12° 22′ 2° 00′—N 12° 13′ W 51° 44′, August 3rd ; depth 5,044—5,033 m.

very small fragment in poor condition it of tube about 2 cm long. The tube bles that of *Pista mirabilis* Mc Intosh but is coated with Foraminifera instead d. Only one gill is preserved. It has a talk with only a few branches as in *P. lis*. There seems to have been only air of gills. No lobes are visible. The s and hooks resemble those of *P. mira-* but the hooks from the 1st neuropodium row of large teeth above the main fang. ecimens of *P. mirabilis* from the Antarctic r Sten Vallin) these hooks are generally smooth, and only now and then is there cely visible denticle, or a very small row m. Moreover, in the specimens of *P. lis* at my disposal the hooks of the first podium form a row conspicuously longer n the second. In the present fragment o first hook rows are of about the same

present specimen agrees with *Pista lis* Fauvel (1914, p. 302, Pl. 28, Fig. ; 1927, p. 224), which Monro (1936,) and Augener (1932, p. 62) regard as a t species.

Gen. et sp.?

Plate II, fig. 1.

erial: St. 370 (Haul No. 9), N 19° 49′ 5° 01′—N 19° 42′ W 64° 44′, August 17th 8th 1948; depth 7,900—7,625 m.

pty muddy tubes (Pl. II, Fig. 1) probably Terebellid, were captured at this station, ner with *Macellicephala* sp., at the greatest at which Polychaetes have hitherto found.

Fam. SABELLIDAE

Potamis dubius n. sp.

Plate II, figs. 2—4; Text-fig. 5.

Material: St. 371 (Haul No. 10), N 24° 12′ W 63° 23′—N 24° 28′ W 63° 18′, August 20th 1948; depth 5,850—5,860 m.

To the genus *Potamis* Ehlers (1887, p. 278) belong besides *P. spathiferus* Ehlers, *Potamis scotiae* Pixell (1913), *Potamilla malmgreni* G. Arm. Hansen (1882, p. 42) and *Potamilla japonica* Johansson (1922, p. 8; 1927, p. 137) and probably also *Parasabella fonticula* Hoagland (1919, p. 579).

Several tubes up to 12 cm in length yielded one complete specimen, two anterior and three posterior fragments, and one part from the middle of the body of a species belonging to the genus *Potamis*. The tubes resemble those of *Euchone papillosa* (Sars).

The worms preserved in their tubes in formalin are white, but tips of gills projecting out of the tubes are yellow. The complete specimen has a body length of about 29 mm and a gill length of about 20 mm with 8 thoracic and 48 abdominal chaetigers.

8—10 radioli on each side. They end in thin, filiform tips. Their inner margin between the two rows of pinnulae is more or less undulated. The two ventral radioli on each side are shorter than the rest. The two most ventral are in the complete specimen provided with a thin lamella bent inward (Pl. II, Fig. 4).

As the worms adhered to the tubes, they were damaged when extracted, especially in the collar region. The description of this must consequently be doubtful in some respects. The collar begins on the dorsal side very near the middle line and behind the first bristle bundle. The two edges of the collar run forward parallel. Between them begins a narrow groove, that goes forward a little longer than the body breadth (Pl. II, Fig. 2). I cannot decide with certainty whether this groove

was bordered by mouldings as in *Potamis malmgreni*[1]) (Pl. II, Fig. 5) and *P. spathiferus* EHLERS (1887, Pl. 54, Fig. 10).

Just before the first bristle bundle the edge of the collar bends at right angles outwards and then runs forward a little more than the breadth of the body. Here it turns to the ventral side and forms on each side a ventral lobe, separated by a deep incision (Pl. II, Fig. 3). In at least one of the specimens these ventral lobes are divided into two flaps (Pl. II, Fig. 3, 4). On the ventral side the collar seems to be split to the base-line as in *P. malmgreni* (Pl. II, Fig. 6) and *P. japonica* (JOHANSSON 1922, Pl. I, Fig. 3). On the ventral side the basal blades are separated by a narrow groove, that begins on a level with the base-line of the collar. From its edges a wing-like lamella runs out on each side just before the collar, by which its posterior part is covered, towards the dorsal side, where it stops on a level with the bristle bundles. Inside its anterior dorsal part there is an ovoid dark spot, the nature of which I cannot decide. Possibly it is a cavity or pocket filled with mud. From the anterior median corner of these wings a rounded lobe stands out, but the part before the wings is too much damaged to be accounted for. On HANSEN's type of *P. malmgreni* there is also a ventral groove with winglike lamellae, but these are relatively smaller (Pl. II, Fig. 6), which is still more the case with *P. japonica* (JOHANSSON 1922, Pl. I).

The chaetigers agree with EHLERS' description of *P. spathiferus* but the limits of the segments are not so marked. The thoracic glandular scutes cover the greater part of the ventral side (Pl. II, Fig. 4). Their limits are indistinct in uncoloured specimens. In the hinder part of the thorax the glands extend around the tori.

[1]) Miss JOHANNE KJENNERUD, the Zool. Museum, Bergen, has kindly placed one of HANSEN's types at my disposal for comparison.

The glandular scutes of the abdo more conspicuous. The first 5—6 ab chaetigers have on each side of th groove a rectangular shield with a well branch around the bristles. In the f chaetigers the anterior part of these gradually diminishes. In the middle abdomen only a small stain remains ventral shields, while the glandula around the parapodia are well develo form transversal bands near the limits of the chaetigers, where they to the dorsal side.

In the first chaetiger there are only bordered bristles with shorter tips tha following segments. In these the dorsal are of two kinds, 3—5 capillary brist wide borders and about 12 spatulate (Text-fig. 5 a). In the ventral tori t avicular hooks and pickaxe chaeta with very long shafts (Text-fig. 5 b). greater part of the abdominal chaetige are ventral bristles of two kinds: 4- bayonet-bent capillary bristles with very borders and 4—2 subspatulate bristles like the thoracic but with longer tips fig. 5 c). The borders of the subs bristles become in the 20—15 last ch gradually longer but narrower. At th time the capillary bristles become and thicker, so that in about the chaetigers there is very little difference the two kinds of bristles (Text-fig. 5 d they agree rather well with those fr third abdominal chaetiger of *P. sp* described and figured by EHLERS (1887 Fig. 3) and also with FAUVEL's and figures and with the bristles from the abdominal chaetigers of *P. malmgreni* (T 5 f). The abdominal hooks are like those by EHLERS and FAUVEL (1914, Pl. 31, F

The three species of the genus described from the Atlantic, *malmgreni ferus* and *scotiae*, appear to be most allied, and in the future the two l

ps be regarded as synonyms of *P. malm-* as will also perhaps the present species. our imperfect knowledge of this genus I thought it better to keep the species apart. chief differences between the present nens and *Potamis malmgreni* are: 1) The is dorsally much higher. In *P. malm-* the collar on the dorsal side forms a perceptible moulding, that runs up the notopodium and proceeds behind this e posterior border of the first chaetiger I, Fig. 5). 2) On the inside of the collar *malmgreni* there is an ovoid dark spot, nature of which I cannot determine. It like a glandular pad, but cannot be d with iodine green. I cannot see this in the present specimens. Instead there dark spot at the dorsal margin of the before the collar, that I cannot detect *malmgreni*. 3) The thoracic hooks of present specimens are more thick-set shorter neck and more prominent breast -fig. 5 b and e) and resemble those of *onica* JOHANSSON (1922, Pl. 4, Fig. 5). e greater part of the abdomen the short es have wider and shorter borders than of *P. malmgreni* and are rather like the cic spatulae but with longer tips (Text- c and f).

om *Potamis spathiferus* EHLERS (1887) FAUVEL (1914) the present specimens y differ only in the form of the thoracic s and of the subspatulate abdominal es, in the absence of the dark spot on entral side of the collar and perhaps also e form of the collar.

tamis malmgreni is found in the north ntic, 2,127—2,222 m (HANSEN); *Potamis iferus* off Sambos, Florida, 275 fms ERS), West Indies, 127 fms, and the n-western Atlantic, 950 fms (AUGENER), near the Azores and Madeira, 1,229— m (FAUVEL 1914, 1932); *Potamis scotiae* he Antarctic, S 71° 22′ W 16° 34′, 1,410 (PIXELL).

Text-fig. 5. *Potamis dubius: a*, Thoracic bristles from the 3rd chaetiger, 370×. *b*, Thoracic hook from the 3rd chaetiger, 635×. *c*, Abdominal bristles from the 19th chaetiger from the posterior end, 370×. *d*, Abdominal bristles from the 8th chaetiger from the posterior end, 370×. *Potamis malmgreni* (ARM. HANSEN): *e*, Thoracic hook from the 4th chaetiger, 500×. *f*, Bristle from the 5th abdominal chaetiger, 370×.

Fam. SERPULIDAE

Vermiliopsis sp.

Plate I, figs. 7—8.

Material: St. 373 (Sledge-Trawl), N 28° 25′ W 61° 05′—N 28° 05′ W 60° 49′, August 23th—24th 1948; depth 5,500—5,987 m.

Tube (Pl. I, Fig. 7) white, about 10 mm in length, with plane upper side divided only in its foremost half by a low, uneven but not denticulated ridge. Its roof is thick (Pl. I, Fig. 8). Its sides in the posterior part faintly and in the anterior more clearly convex, devoid of longitudinal ridges but with six transverse, low enlargements. Its peristom is protected by a beetling roof with an obtuse tooth.

The operculum is smashed. In other respects the specimen agrees with FAUVEL's description of *Vermiliopsis langerhansi* (1914, p. 344; 1927, p. 363), except that the bristles of the first bundle seem to be more slender.

Protis arctica (G. ARM. HANSEN)

Protula arctica G. A. HANSEN 1882, p. 43
Protula? arctica WOLLEBAEK 1911, p. 120
Protis arctica FAUVEL 1914, p. 325
? *Protis simplex* EHLERS 1887, p. 325.

Material: St. 342 (Haul No. 4), N 01° 03′ W 18° 40′—N 00° 58′ W 18° 37′, July 16th 1948; depth 5,250—5,300 m: 1 specimen.

One specimen without gills. It mea mm and its tube 77 mm. It diffe WOLLEBAEK's and FAUVEL's descripti in having in front view broader ab hooks with up to 4 irregular longitudi of small teeth instead of 2.[1])

Earlier recorded from the Atlantic: the Azores, Florida? 860 fms? (EH 4,400 m.

Gen. et sp.?

Material: St. 387 (Haul No. 13), N W 35° 24′—N 40° 34′ W 35° 52′, Se 1948; depth 4,540—4,600 m.

Some very small white tubes, about wide, were obtained from off a br *Levinsenella magna* (BUSK). They rec of *Filograna*. One of them contained a with a body-length of 1.5 mm. No op is visible. The collar is a continuous m except for a deep dorsal and a slight incision. There are 6 thoracic chaetiger tori on the left and 4 on the right si two last notopodiae on each side ha a few bristles. There seem to be 2 bristles in all notopodiae, even the fi ones with winged tips, and short slend In the abdomen I can see only fine bristles in the last segments.

[1]) Miss J. KJENNERUD of the Museum of Be versity has kindly placed one of HANSEN's type at my disposal.

LIST OF POLYCHAETES RECORDED FROM DEPTHS BEYOND 3,000 M IN THE LITERATURE AT MY DISPOSAL.

	Depth in m	Locality	Expedition	Author
Aphroditidae				
atonice filicornis Kinberg	4,870	N 45° 07′ W 07° 06′	Monaco Exps.	Fauvel 1914
	4,965	N 44° 29′ W 10° 31′	Monaco Exps.	Fauvel 1914
	5,000	N 44° 08′ W 10° 44′	Monaco Exps.	Fauvel 1914
	4,700	N 45° 26′ W 09° 20′	Michael Sars	Støp-Bowitz 1948
	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
atonice producta v. benthaliana				
Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1885
	4,206	N 35° 41′ E 157° 42′	Challenger	Mc Intosh 1885
	5,303	N 35° 22′ E 169° 53′	Challenger	Mc Intosh 1885
	3,840—3,872	Centr. Arabian Sea	John Murray Exp.	Monro 1937
atonice producta v. willemoesi				
Intosh	3,064	N 38° 25′ W 35° 50′	Challenger	Mc Intosh 1885
	3,475	S 35° 41′ W 20° 55′	Challenger	Mc Intosh 1885
atonice producta v. wyvillei ..				
Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1885
	5,706	S 12° 54′ W 78° 33′	U. S. S. Albatross	Chamberlin 1919
	4,016—4,074	N 33° 10′ W 121° 42′	U. S. S. Albatross	Moore 1910
icephala macrophthalma				
vel.....	4,780	N 45° 27′ W 06° 05′	Monaco Exps	Fauvel 1914
icephala abyssicola Fauvel	4,380	N 46° 17′ W 05° 45′	Monaco Exps	Fauvel 1914
	4,267—4,255	N 29° 48′ W 17° 39′	Swedish Deep-Sea Exp.	
	4,872—4,867	N 22° 31′ W 23° 28′	Swedish Deep-Sea Exp.	
icephala sp.	7,625—7,900	N 19° 49′ W 65° 01′	Swedish Deep-Sea Exp.	
ella longipedata Mc Intosh....	5,000—5,025	N 43° 40′ W 18° 45′	Swedish Deep-Sea Exp.	
abyssorum Mc Intosh	4,755	S 42° 42′ E 134° 10′	Challenger	Mc Intosh 1885
eura Chamberlin	5,706	S 12° 54′ W 78° 33′	U. S. S. Albatross	Chamberlin 1919
thoe imbricata (Linné)	3,520	N 59° 12′ W 51° 05′	Ingolf	Ditlevsen 1917
thoë globifera (Sars)	3,520	N 59° 12′ W 51° 05′	Ingolf	Ditlevsen 1917
thoe badia (Théel).....	3,520	N 59° 12′ W 51° 05′	Ingolf	Ditlevsen 1917
thoë bathydomus Ditlevsen...	3,229	N 60° 17′ W 54° 05′	Ingolf	Ditlevsen 1917
thoe spinosa Kinberg	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
a moseleyi Mc Intosh	3,385	N 01° 47′ W 24° 26′	Challenger	Mc Intosh 1885
e ascidioides Mc Intosh	4,755	S 42° 42′ E 134° 10′	Challenger	Mc Intosh 1885
e platycirrus Mc Intosh.....	4,024	S 36° 57′ E 150° 34′	Challenger	Mc Intosh 1885
e (?) renotubulata Moore	4,016—4,074	N 33° 43′ W 117° 42′	U. S. S. Albatross	Moore 1910
enelais abyssicola Mc Intosh ...	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 1878
ine.....	4,636	S 63 16′ E 57 51′	Valdivia	Ehlers 1912
Phyllodocidae				
lyllum coccum Fauvel.....	5,005	N 38° 55′ W 21° 18′	Monaco Exps	Fauvel 1914
doce madeiriensis Langerhans .	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
Nereidae				
zonata Malmgren	3,980	N 16° 12′ W 24° 43′	Monaco Exps	Fauvel 1914
kerguelensis Mc Intosh	5,005	N 38° 55′ W 21° 18′	Monaco Exps	Fauvel 1914
incinata Ehlers.....	3,584	S 50° 57′ E 07° 39′	Valdivia	Ehlers 1912
paucidentata Moore	4,016	N 33° 10′ W 121° 42′	U. S. S. Albatross	Moore 1911
Nephthydidae				
hys elamellata n. sp.	4,267—4, 255	N 29° 48′ W 17 39′	Swedish Deep-Sea Exp.	
	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	

	Depth in m	Locality	Expedition	Autho
Glyceridae				
Glycera capitata Örsted	3,200	N 59° 10′ W 50° 25′	Valorous	Mc Intosh 18
Glycera rouxi Audouin & Edwards	4,380	N 46° 17′ W 05° 45′	Monaco Exps	Fauvel 1914
Glycera fundicula Chamberlin	4,063	S 05° 42′ W 83° 00′	U. S. S. Albatross	Chamberlin
Buskiella abyssorum Mc Intosh	4,572	N 05° 48′ W 14° 20′	Challenger	Mc Intosh 18
	3,385	N 01° 47′ W 24° 26′	Challenger	Mc Intosh 18
	3,703	S 35° 36′ W 21° 12′	Challenger	Mc Intosh 18
Sphaerodoridae				
Ephesia antarctica Mc Intosh	3,612	S 62° 26′ E 95° 44′	Challenger	Mc Intosh 18
Sphaerodorum parvum Ehlers	3,423	S 65° 15′ E 80° 00′	Gauss	Ehlers 1913
Sphaerodorum brevicapitis Moore	3,740	Off Southern California	U. S. S. Albatross	Moore 1909
Eunicidae				
Eunice pennata (O. F. Müller)	3,229	N 60° 17′ W 54° 05′	Ingolf	Wesenberg-L
Diopatra paucibranchis Ehlers	4,636	S 63° 16′ E 57° 51′	Valdivia	Ehlers 1912
Hyalinoecia tubicola (O. F. Müller)	4,376	West India, NW S:a Cruz	Blake	Augener 190
Hyalinoecia edwardsi Roule	4,255	Between the Azores and Spain	Talisman	Roule 1906
Hyalinoecia benthaliana Mc Intosh	3,292	S 50° 01′ E 123° 04′	Challenger	Mc Intosh 18
Nothria abranchiata Mc Intosh	3,612	S 62° 26′ E 95° 44′	Challenger	Mc Intosh 18
Nothria armandi Mc Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 18
Nothria pychnobranchiata Mc Intosh	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 18
Nothria ehlersi Mc Intosh	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 18
Onuphis conchylega Sars	4,020	N 38° 09′ W 23° 15′	Monaco Exps	Fauvel 1914
Onuphis sp	4,020	N 38° 09′ W 23° 15′	Monaco Exps	Fauvel 1914
Onuphis litabranchia Chamberlin	3,436	N 14° 46′ W 98° 40′	U. S. S. Albatross	Chamberlin
Onuphis cobra Chamberlin	3,240	N 04° 56′ W 80° 52′	U. S. S. Albatross	Chamberlin
Onuphis pachytmema Chamberlin	4,334	S 08° 30′ W 85° 30′	U. S. S. Albatross	Chamberlin
Onuphis socia Chamberlin	4,755	S 11° 51′ W 84° 20′	U. S. S. Albatross	Chamberlin
	5,203	S 13° 11′ W 78° 18′	U. S. S. Albatross	Chamberlin
Leptoecia abyssorum Chamberlin	3,666	S 04° 33′ W 87° 07′	U. S. S. Albatross	Chamberlin
Cenogenus descendens Chamberlin	4,063	S 05° 42′ W 83° 00′	U. S. S. Albatross	Chamberlin
Ninoë fusca Moore	4,016	N 33° 10′ W 121° 42′	U. S. S. Albatross	Moore 1911
Lumbriconereis fragilis (O. F. Müller)	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 18
Lumbriconereis abyssorum Mc Intosh	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 18
Lumbriconereis impatiens Claparède	4,380	N 46° 17′ W 05° 45′	Monaco Exps	Fauvel 1914
Lumbriconereis bifilaris Ehlers	3,990	N 33° 02′ W 120° 42′	U. S. S. Albatross	Moore 1911
Lumbriconereis minuscula Moore	3,990	N 33° 02′ W 120° 42′	U. S. S. Albatross	Moore 1911
Lumbriconereis sp	4,636	S 63° 16′ E 57° 51′	Valdivia	Ehlers 1912
Ariciidae				
Aricia sp	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
Spionidae				
Prionospio steenstrupi Malmgren	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 18
Chaetopteridae				
Gen. et sp.?	5,610—5,600	N 09° 38′ W 26° 20′	Swedish Deep-Sea Exp.	
	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
Cirratulidae				
Tharyx gracilis Moore	4,016	St. 4397, off southern California	U. S. S. Albatross	Moore 1923
Tharyx sp	4,380	N 46° 17′ W 05° 45′	Monaco Exps	Fauvel 1914
Macrochaeta sp	5,033—5,044	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Gen. et sp.?	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	

	Depth in m	Locality	Expedition	Author
Chloraemidae				
nia sarsi Mc Intosh	3,612	S 62° 26′ E 95° 44′	Challenger	Mc Intosh 1922
nia wyvillei Mc Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1885
gravieri Mc Intosh	3,292	S 50° 01′ E 123° 04′	Challenger	Mc Intosh 1922
irenaia Chamberlin	3,280	N 06° 21′ W 80° 41′	U. S. S. Albatross	Chamberlin 1919
gus bythincola Chamberlin	3,436	N 14° 46′ W 98° 40′	U. S. S. Albatross	Chamberlin 1919
gus pluto Chamberlin	5,203	S 13° 11′ W 78° 18′	U. S. S. Albatross	Chamberlin 1919
gus hirsutus Monro	3,385	South Arabian Sea	John Murray Exp.	Monro 1937
Scalibregmidae				
sp.?	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Opheliidae				
rypane cylindricaudatus Hansen	3,521	N 59° 12′ W 51° 05′	Ingolf	Wesenberg-Lund 1950
rypane nybelini n. sp.	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
rypanella arctica Mc Intosh	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 1878
	4,360	N 39° 54′ W 18° 06′	Monaco Exps	Fauvel 1914
trypane jeffreysi Mc Intosh	3,200	N 59° 10′ W 50° 25′	Valorous	Mc Intosh 1878
	3,910	N 46° 45′ W 05° 50′	Monaco Exps	Fauvel 1914
	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
a glandulosa Mc Intosh	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 1878
a profundi Chamberlin	4,063	S 05° 42′ W 83° 00′	U. S. S. Albatross	Chamberlin 1919
a sp.	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
fusus Chamberlin	4,504	N 00° 50′ W 137° 54′	U. S. S. Albatross	Chamberlin 1919
Capitellidae				
stus latericius Sars	4,360	N 39° 54′ W 18° 06′	Monaco Exps	Fauvel 1914
sp.?	4,540—4,600	N 40° 33′ W35° 24′	Swedish Deep-Sea Exp.	
Oweniidae				
fusiformis delle Chiaje	3,264	N 55° 10′ W 25° 58′	Valorous	Mc Intosh 1878
	4,391	Banda Sea, St. 223	Siboga	Mesnil and Fauvel 1939
sp.	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
hele heeri Malmgren	5,270	N 39° 59′ W 56° 20′	Hirondelle II	Fauvel 1932
	5,441	N 18° 56′ W 59° 35′	Challenger	Mc Intosh 1885
	4,846	S 36° 44′ W 46° 16′	Challenger	Mc Intosh 1885
hele pacifica Mc Intosh	4,755	S 03° 48′ W 152° 56′	Challenger	Mc Intosh 1885
hele sp.	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
Maldanidae				
octus oculatus v. antarcticus dsson	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
octus pacificus Moore	4,016—4,075	N 33° 10′ W 121° 42′	U. S. S. Albatross	Moore 1923
	4,391	Banda Sea, St. 223	Siboga	Mesnil and Fauvel 1939
octus scutiferus Wesenberg-l	3,229	N 60° 17′ W 54° 05′	Ingolf	Wesenberg-Lund 1950
ache ? benthaliana Mc Intosh	4,206	N 35° 41′ E 157° 42′	Challenger	Mc Intosh 1885
ache sp.	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
a abyssorum Mc Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1885
ella valparaisiensis Mc Intosh	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 1885
ella harai (Izuka)	4,380	N 46° 17′ W 05° 45′	Monaco Exps	Fauvel 1914
	4,700	N 45° 46′ W 09° 20′	Michael Sars	Støp-Bowitz 1948
ella fibrillata Chamberlin	3,436	N 14° 46′ W 98° 40′	U. S. S. Albatross	Chamberlin 1919

	Depth in m	Locality	Expedition	Auth
Maldanella davisi Wesenberg-Lund ..	3,229	N 60° 17′ W 54° 05′	Ingolf	Wesenberg-L
Maldane sarsi Malmgren	4,391	Banda Sea, St. 223	Siboga	Mesnil and 1939
	5,270	N 39° 59′ W 56° 20′	Hirondelle II	Fauvel 1932
Asychis amphiglypta (Ehl.) v. abyssicola n. var.....	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Sonatsa meridionalis Chamberlin ...	4,063	S 05° 42′ W 83° 00′	U. S. S. Albatross	Chamberlin
Gen. et sp.?.....	3,436	N 14° 46′ W 98° 40′	U. S. S. Albatross	Chamberlin
Ampharetidae				
Ampharete arctica Malmgren	5,270	N 39° 59′ W 56° 20′	Hirondelle II	Fauvel 1932
? Ampharete patagonica Kinberg ..	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913
Amphicteis gunneri (Sars) v. atlantica Mc Intosh	5,030	N 35° 29′ W 50° 53′	Challenger	Mc Intosh 1
Amphicteis sarsi Mc Intosh.....	4,846	S 36° 44′ W 46° 16′	Challenger	Mc Intosh 1
Eusamytha pacifica Mc Intosh.....	4,206	N 35° 41′ E 157° 42′	Challenger	Mc Intosh 1
Samythopsis grubei Mc Intosh.....	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 1
Grubianella antarctica Mc Intosh ..	3,293	S 50° 01′ E 123° 04′	Challenger	Mc Intosh 1
	3,612	S 62° 26′ E 95° 44′	Challenger	Mc Intosh 1
Pabits deroderus Chamberlin.....	4,504	S 0° 50′ W 137° 54′	U. S. S. Albatross	Chamberlin
Paiwa abyssi Chamberlin.....	4,087	S 05° 17′ W 85° 20′	U. S. S. Albatross	Chamberlin
Melinna cristata (Sars) subsp. heterodonta Moore.....	4,075	N 33° 01′ W 121° 28′	U. S. S. Albatross	Moore 1923
Melinna pacifica Mc Intosh.....	3,750	N 36° 10′ E 178° 00′	Challenger	Mc Intosh 1
Melinna buski Mc Intosh.....	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1
Melinnopsis atlantica Mc Intosh....	3,110	N 37° 25′ W 71° 41′	Challenger	Mc Intosh 1
? Melinnopsis atlantica Mc Intosh ...	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Sosanopsis armipotens Moore	4,075	N 33° 10′ W 121° 42′	U. S. S. Albatross	Moore 1923
Moyanus explorans Chamberlin	4,063	S 05° 42′ W 83° 00′	U. S. S. Albatross	Chamberlin
Melinnides rostrata Wesenberg-Lund	3,229	N 60° 17′ W 54° 05′	Ingolf	Wesenberg-L
Terebellidae				
Terebellides eurystethus Chamberlin	4,755	S 11° 55′ W 81° 20′	U. S. S. Albatross	Chamberlin
Trichobranchus sp.	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Pista abyssicola Mc Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1
Pista sp.	5,044—5,033	N 12° 22′ W 52° 00′	Swedish Deep-Sea Exp.	
Scione spinifera Ehlers	4,636	S 63° 16′ E 57° 51′	Valdivia	Ehlers 1912
	3,397	S 65° 27′ E 80° 33′	Gauss	Ehlers 1913.
Eupista darwini Mc Intosh	5,030	N 35° 29′ W 50° 53′	Challenger	Mc Intosh 1
	4,070	S 34° 07′ W 73° 56′	Challenger	Mc Intosh 1
Eupista grubei Mc Intosh	4,846	S 36° 44′ W 46° 16′	Challenger	Mc Intosh 1
Eupista dibranchiata Fauvel.....	5,270	N 39° 59′ W 56° 20′	Hirondelle II	Fauvel 1932
Leaena antarctica Mc Intosh	3,612	S 62° 26′ E 95° 44′	Challenger	Mc Intosh 1
Leaena abyssorum Mc Intosh.....	5,715	N 38° 09′ W 156° 25′	Challenger	Mc Intosh 1
Lanassa benthaliana Mc Intosh	5,030	N 35° 29′ W 50° 53′	Challenger	Mc Intosh 1
Euthelepus chilensis Mc Intosh	3,950	S 33° 31′ W 74° 43′	Challenger	Mc Intosh 1
Ehlersiella atlantica Mc Intosh.....	5,030	N 35° 29′ W 50° 53′	Challenger	Mc Intosh 1
Gen. et sp.? Empty tubes	7,900—7,625	N 19° 49′ W 65° 01′	Swedish Deep-Sea Exp.	
Sabellidae				
Potamis spathiferus Ehlers	4,360	N 39° 54′ W 18° 06′	Monaco Exps	Fauvel 1914
Potamis dubius n. sp.	5,850—5,860	N 24° 12′ W 63° 23′	Swedish Deep-Sea Exp.	
Notaulax mucronata Moore.....	4,016	N 33° 10′ W 121° 41′	U. S. S. Albatross	Moore 1923
	4,131	N 32° 54′ W 121° 15′	U. S. S. Albatross	Moore 1923
Chone infundibuliformis Kröyer	3,521	N 59° 12′ W 51° 05′	Ingolf	Wesenberg-L

	Depth in m	Locality	Expedition	Author
Serpulidae				
s norvegica (Gunnerus)....	4,808	N 46° 12′ W 06° 54′	Monaco Exps	Fauvel 1914
chus jousseaumei Gravier .	4,892	Banda Sea, St. 203	Siboga	Mesnil and Fauvel 1939
eros triqueter (Linné)	4,808	N 46° 12′ W 06° 54′	Monaco Exps	Fauvel 1914
us ornatus Sowerby	4,343	S 32° 36′ W 137° 43′	Challenger	Mc Intosh 1885
	5,303	N 35° 22′ E 169° 53′	Challenger	Mc Intosh 1885
	5,715	N 38° 09′ W 156° 25′	Challenger	Mc Intosh 1885
us benthalianus Mc Intosh	5,715	N 38° 09′ W 156° 25′	Challenger	Mc Intosh 1885
us mörchi Mc Intosh	4,343	S 32° 36′ W 137° 43′	Challenger	Mc Intosh 1885
sis langerhansi Fauvel	4,020	N 38° 09′ W 23° 15′	Monaco Exps	Fauvel 1914
sis sp.	5,500—5,987	N 28° 25′ W 61° 05′	Swedish Deep-Sea Exp.	
s similis Mar. and Bobr. ..	4,400	N 36° 54′ W 21° 51′	Monaco Exps	Fauvel 1914
ctica (Arm. Hansen)	4,400	N 36° 54′ W 21° 51′	Monaco Exps	Fauvel 1914
	5,250—5,300	N 01° 03′ W 18° 40′	Swedish Deep-Sea Exp.	
sp.....	3,404	Davis Strait St. 11	Valorous	Mc Intosh 1878
p	4,575—5,790		Challenger	Mc Intosh 1885, p. XXXVI
sp.?.....	4,540—4,600	N 40° 33′ W 35° 24′	Swedish Deep-Sea Exp.	
Incertae sedis				
sis challengeriae Mc Intosh	3,566	S 53° 55′ E 108° 35′	Challenger	Mc Intosh 1922

References

widsson, I. Die Maldaniden. Wiss. Ergebn. d. Schwedischen Südpolar-Exp. 1901—03. Bd. 6, Lief. 6. Stockholm.

gener, H. Westindische Polychaeten. Bull. Mus. Compar. Zool. Harvard Coll. Vol. 43. Cambridge, Mass.

— Beitrag zur Kenntnis verschiedener Anneliden. Arch. f. Naturg. Abt. A. 78: 10. Berlin.

— Polychaeten. Zool. Erg. der Reisen von Dr Kohl-Larsen etc. Zenckenbergiana. Bd 14, Nr 3. Frankfurt a. M.

— Antarktische und antiboreale Polychaeten etc. Sci. Res. of the Norwegian Antarctic Exped. 1927—28. Nr 9. Oslo.

— Polychaeten aus den Zool. Museen von Leiden und Amsterdam. Zool. Mededeel. Rijks Museum van Natuurl. Hist. Leiden 15. Leiden.

amberlin, R. The Annelida Polychaeta. Mem. Mus. Comp. Zool. Harvard Coll. Vol. 16. Cambridge, Mass.

tlevsen, Hj. Annelids I. The Danish Ingolf Exped. Vol. 4: 4. Copenhagen.

ilers, E. Florida Anneliden. Mem. Mus. Compar. Zool. Harvard Coll. Vol. 15. Cambridge, Mass.

— Polychaeten Hamburger magalhaenische Sammelreise. Hamburg.

1901 Ehlers, E. Die Polychaeten des magellanischen und chilenischen Strandes. Festschrift d. k. Gesellsch. d. Wiss. Göttingen.

1912a — — Die Boden-sässigen Anneliden d. deutschen Tiefsee Exp. Wiss. Ergebn. d. D. Tiefsee-Exp. 16. Jena.

1912b — — Polychaeta. National Antarctic Exp. 1901—04. Nat. Hist. 6 Zool. London.

1913 — — Die Polychaeten-Sammlungen d. deutschen Südpolar-Exp. 1901—03. D. Südpolar-Exp. 13. Berlin.

1913 Fauvel, P. Quatrième note préliminaire sur les Polychètes de l'Hirondelle etc. Bull. Inst. Océanogr. Monaco. 269.

1914 — — Annélides Polychètes non pelagiques. Résult. scient. des Campagnes du Prince Albert I:er de Monaco 46.

1923 — — Polychètes Errantes. Faune de France 5. Paris.

1927 — — Polychètes Sédentaires. Faune de France 16. Paris.

1932 — — Annélides Polychètes provenant des Campagnes de l'Hirondelle II. Résult. scient. des Campagnes du Prince Albert I:er de Monaco.

1936 — — Polychètes. Résult. du Voyage de la Belgica en 1897—99. Anvers.

1877 Grube, E. Anneliden-Ausbeute S. M. S. »Gazelle». Monatsber. k. Preuss. Akad. d. Wiss. Berlin.

1882 Hansen, G. Arm. Annelida. Den Norske Nordhavs-Exp. 1876—78. 7. Zool. Christiania.
1919 Hoagland, R. Polychaetous Annelids from Porto Rico, the Florida Keys and Bermuda. Bull. Amer. Mus. Nat. Hist. New York. 41.
1917 Horst, R. Polychaeta Errantia II. Siboga—Expeditie. Monogr. 24: 1 b. Leiden.
1922 Johansson, K. E. On some new tubicolous Annelids from Japan etc. Arkiv för Zoologi. Bd. 15 Nr. 2. Uppsala.
1927 — — Beiträge zur Kenntnis der Polychaeten-Familien Hermellidae, Sabellidae und Serpulidae. Zool. Bidrag. Uppsala 11. Uppsala.
1910 Kinberg, J. G. H. Annulater. Vet. Iakttagelser under k. Svenska fregatten Eugenies resa omkring jorden 1851—53. Bd. 2. Stockholm.
1887 Levinsen, G. M. R. Kara-Havets Ledorme (Annulata). Dijmphna-Togtets zool.-botan. Udbytte. Kjöbenhavn.
1878 Mc Intosh, W. C. On the Annelida obtained during the Cruise of H. M. S. »Valorous». Trans. Linn. Soc. London 2: 1.
1885 — — Report on the Annelida Polychaeta. Rep. Scient. Res. »Challenger». Zool. Vol. 12. London.
1922 — — On new and rare Polychaeta etc. Ann. Mag. Nat. Hist. Ser. 9. Vol. 9. London.
1939 Mesnil et Fauvel. Polychètes sédent —Expeditie. Monogr. 24: 2. L
1930 Monro, C. C. A. Polychaete Worms Reports. Vol. 2. Cambridge.
1936 — — Polychaete Worms II. Ibid. V
1937 — — Polychaeta. John Murray 1933—34. Sci. Rep. Vol. 4. N
1909—23. Moore, J. P. Polychaetous anne by U. S. S. Albatross off t southern California. I 1909, 1911, IV 1923. Proc. Acad Philadelphia. 61, 62, 63, 75.
1913 Pixell, H. L. M. Polychaeta of Serpulidae and Sabellidae c Scottish National Antarctic Trans. Roy. Soc. Edinburgh.
1948 Støp-Bowitz, C. Polychaeta from Sars» North Atlantic Deep-Sea 1910. Rep. Scient. Res. of Sars» North Atlantic Deep-Sea Vol. 5, Nr 8. Bergen.
1907 Wirén, A. Macellicephala violacea Bemerkungen über deren Ana Studier tillägnade Prof. T. Tull
1950 Wesenberg-Lund, E. Polychaeta. Ingolf-Exp. Vol. 4: 14. Copenh
1912 Wollebaek, A. Nordeuropaeiske An chaeta I. Videnskapsselskapet Mat.-Naturv. Klasse. Nr 18. K

Explanation of plates

PLATE I.

Fig. 1. Cirratulid, gen. et sp.?
a. Anterior region from above.
b. Lower ventral bristle from the 16th chaetiger.
c. Upper dorsal bristle from the 16th chaetiger.

Fig. 2—3. *Ammotrypane nybelini* n. sp.
2. Posterior region from the right side. 15×.
3. Posterior region from below. 30×.

Fig. 4—6. *Asychis amphiglypta* (Ehl.) var. *abyssicola* n. var.
4. Head from above.
5. Anterior region stained with iodine green. 24×.
6. Posterior region stained with iodine green. 15×.

Fig. 7—8. *Vermiliopsis* sp.
7. Tube. 15×.
8. Section of anterior part of the tube.

PLATE II.

Fig. 1. Tubes of Terebellid from St. 370, 7,9 Nat. size.

Fig. 2—4. *Potamis dubius* n. sp. Anterior end from the side and from below. Fig. 4 After s iodine green. 30×.

Fig. 5—6. *Potamis malmgreni* (G. Arm. Han rior end from above and from the s

1a
2
5
4
3
6
1c
1b
8
7